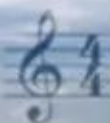


A photograph of an astronaut in a blue flight suit inside a spacecraft, with Earth's horizon in the background. The image is overlaid with musical notation and Japanese lyrics. The text 'music in SPACE' is prominently displayed in the center. The musical notation includes a treble clef, a 4/4 time signature, and three lines of notes with corresponding Japanese and Romanized lyrics.

music

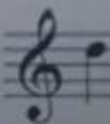
in

SPACE



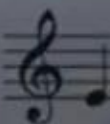
き み が
ki mi ga

は
wa



や ち よ
ya chi yo

し の
shi no



な り て
na ri te

こ け の
ko ke no

1
00:02:37,190 --> 00:02:35,270
hi and welcome to nasa's johnson space

2
00:02:39,589 --> 00:02:37,200
center my name is patricia moore and i

3
00:02:41,910 --> 00:02:39,599
am with nasa's digital learning network

4
00:02:43,589 --> 00:02:41,920
or dlm for short and the digital

5
00:02:45,830 --> 00:02:43,599
learning network connects students and

6
00:02:47,350 --> 00:02:45,840
educators utilizing video conferencing

7
00:02:49,750 --> 00:02:47,360
and webcasts

8
00:02:52,790 --> 00:02:49,760
to scientists engineers astronauts and

9
00:02:54,309 --> 00:02:52,800
nasa specialists here at nasa and today

10
00:02:56,150 --> 00:02:54,319
the digital learning network and the

11
00:02:58,309 --> 00:02:56,160
public affairs office at johnson space

12
00:03:01,430 --> 00:02:58,319
center is collaborating on a very

13
00:03:03,110 --> 00:03:01,440

special event that takes together music

14

00:03:04,550 --> 00:03:03,120

and the culturals of the international

15

00:03:06,790 --> 00:03:04,560

space station

16

00:03:08,470 --> 00:03:06,800

so i'd like to welcome everybody here

17

00:03:10,550 --> 00:03:08,480

today and there are many guests on the

18

00:03:12,630 --> 00:03:10,560

stage with me that i'd like to introduce

19

00:03:15,750 --> 00:03:12,640

i'd like to begin by introducing our

20

00:03:17,830 --> 00:03:15,760

choir from pearl hall elementary in

21

00:03:20,149 --> 00:03:17,840

pasadena texas

22

00:03:21,830 --> 00:03:20,159

i'd also like to mention that

23

00:03:23,670 --> 00:03:21,840

pearl hall is a part of

24

00:03:25,990 --> 00:03:23,680

pasadena's independent school district

25

00:03:27,670 --> 00:03:26,000

and south houston high school is one of

26

00:03:29,270 --> 00:03:27,680

these high schools that has an

27

00:03:31,589 --> 00:03:29,280

experiment on the international space

28

00:03:34,229 --> 00:03:31,599

station and so thank you the choir for

29

00:03:37,270 --> 00:03:34,239

being here i'd also um like to introduce

30

00:03:39,430 --> 00:03:37,280

uh jamie leupold who is their educator

31

00:03:41,110 --> 00:03:39,440

and pat surface who's the choir director

32

00:03:43,589 --> 00:03:41,120

who's behind the scenes

33

00:03:44,470 --> 00:03:43,599

i'd like to introduce our musicians we

34

00:03:46,470 --> 00:03:44,480

have

35

00:03:47,990 --> 00:03:46,480

sergey galperin who is a part of the

36

00:03:49,270 --> 00:03:48,000

houston symphony and he's first

37

00:03:51,430 --> 00:03:49,280

violinist

38

00:03:54,949 --> 00:03:51,440

and kenji williams

39

00:03:57,830 --> 00:03:54,959

director and violinist of bella gaia

40

00:04:00,149 --> 00:03:57,840

and my co-host today astronaut katie

41

00:04:01,750 --> 00:04:00,159

coleman so thank you everyone for being

42

00:04:03,750 --> 00:04:01,760

here with us today

43

00:04:05,509 --> 00:04:03,760

now in addition to the folks here on the

44

00:04:07,910 --> 00:04:05,519

stage with us we have some virtual

45

00:04:10,149 --> 00:04:07,920

participants our first school i'd like

46

00:04:12,630 --> 00:04:10,159

to introduce is pearl hall elementary in

47

00:04:14,149 --> 00:04:12,640

pasadena texas so pearl hall would you

48

00:04:21,189 --> 00:04:14,159

please emit your microphone and say

49

00:04:25,430 --> 00:04:23,189

ah well thank you pearl hall all right

50

00:04:27,830 --> 00:04:25,440

so next i'd like to introduce our second

51
00:04:31,030 --> 00:04:27,840
participant it's henry university and

52
00:04:33,030 --> 00:04:31,040
henry university was crucial in allowing

53
00:04:35,189 --> 00:04:33,040
a special japanese instrument to be

54
00:04:37,270 --> 00:04:35,199
flown to the international space station

55
00:04:47,110 --> 00:04:37,280
so tinry university please them your

56
00:04:50,390 --> 00:04:48,710
all right all right so we'll connect

57
00:04:52,710 --> 00:04:50,400
back with henry in just a moment maybe

58
00:04:55,030 --> 00:04:52,720
they may have some audio difficulty all

59
00:04:57,110 --> 00:04:55,040
right so what i'd like to do to begin

60
00:04:58,550 --> 00:04:57,120
our program is invite katie to share

61
00:05:00,150 --> 00:04:58,560
with us a little bit about the

62
00:05:02,230 --> 00:05:00,160
international space station and the

63
00:05:03,909 --> 00:05:02,240

project

64

00:05:06,469 --> 00:05:03,919

well we're here today

65

00:05:07,350 --> 00:05:06,479

basically to play music all around the

66

00:05:09,029 --> 00:05:07,360

world

67

00:05:11,029 --> 00:05:09,039

so we're here in houston we have a

68

00:05:13,110 --> 00:05:11,039

school in japan we have a school in

69

00:05:14,870 --> 00:05:13,120

houston and we have musicians from

70

00:05:17,350 --> 00:05:14,880

everywhere and we're going to celebrate

71

00:05:19,990 --> 00:05:17,360

basically the international nature of

72

00:05:22,629 --> 00:05:20,000

the space station it's built by 16

73

00:05:24,870 --> 00:05:22,639

different countries and when we're up

74

00:05:26,230 --> 00:05:24,880

there as a crew of six

75

00:05:28,390 --> 00:05:26,240

sometimes we have you know some of the

76
00:05:30,629 --> 00:05:28,400
countries represented sometimes others

77
00:05:32,950 --> 00:05:30,639
and right now we have koichi wakata from

78
00:05:35,350 --> 00:05:32,960
japan on the station with two americans

79
00:05:37,189 --> 00:05:35,360
and his three russian crewmates and so

80
00:05:38,629 --> 00:05:37,199
we're going to celebrate the music of

81
00:05:41,350 --> 00:05:38,639
russia japan

82
00:05:42,390 --> 00:05:41,360
america and whatever else comes to mind

83
00:05:44,629 --> 00:05:42,400
we'll see

84
00:05:46,310 --> 00:05:44,639
the space station itself is i just i

85
00:05:48,070 --> 00:05:46,320
like to see pictures of it it looks to

86
00:05:50,469 --> 00:05:48,080
me like it's an animation like this was

87
00:05:53,029 --> 00:05:50,479
a cartoon but that's a real place i

88
00:05:54,390 --> 00:05:53,039

lived there for six months koichi wakata

89

00:05:57,749 --> 00:05:54,400

and his crewmates have been up there for

90

00:05:59,830 --> 00:05:57,759

almost six as well and it's an amazing

91

00:06:01,029 --> 00:05:59,840

amazing place people think they feel bad

92

00:06:03,189 --> 00:06:01,039

for us because

93

00:06:05,029 --> 00:06:03,199

going to space it's it's pretty small

94

00:06:07,270 --> 00:06:05,039

but actually when we're up on that space

95

00:06:08,790 --> 00:06:07,280

station it's giant and huge it's like

96

00:06:11,430 --> 00:06:08,800

that that picture that you saw it's like

97

00:06:13,670 --> 00:06:11,440

10 train cars all together it's the size

98

00:06:15,749 --> 00:06:13,680

of a football field so it's like train

99

00:06:18,150 --> 00:06:15,759

cars with our buses without the seats in

100

00:06:20,469 --> 00:06:18,160

them and in that volume we can do

101
00:06:22,870 --> 00:06:20,479
science experiments we can we can do all

102
00:06:23,749 --> 00:06:22,880
sorts of things and we fly from place to

103
00:06:25,270 --> 00:06:23,759
place

104
00:06:26,950 --> 00:06:25,280
one of the things that

105
00:06:28,710 --> 00:06:26,960
i really like to talk about is the

106
00:06:31,189 --> 00:06:28,720
science that we do up on the space

107
00:06:33,350 --> 00:06:31,199
station and we've got a great picture of

108
00:06:35,749 --> 00:06:33,360
koichi that shows

109
00:06:38,390 --> 00:06:35,759
just why we do science we do experiments

110
00:06:41,270 --> 00:06:38,400
up there that we cannot do down here on

111
00:06:42,469 --> 00:06:41,280
the ground look at that ball of water

112
00:06:43,830 --> 00:06:42,479
down here on the ground it would be a

113
00:06:47,510 --> 00:06:43,840

puddle on the ground

114

00:06:48,550 --> 00:06:47,520

and and so up in space because it forms

115

00:06:49,830 --> 00:06:48,560

a sphere

116

00:06:52,790 --> 00:06:49,840

we get to see

117

00:06:55,589 --> 00:06:52,800

what does water really want to do

118

00:06:57,749 --> 00:06:55,599

we get to grow crystals where crystals

119

00:07:00,230 --> 00:06:57,759

are growing more perfectly we get to

120

00:07:02,469 --> 00:07:00,240

study combustion where we're looking at

121

00:07:05,189 --> 00:07:02,479

candle flames that don't look like this

122

00:07:07,830 --> 00:07:05,199

but actually are round and spherical and

123

00:07:10,629 --> 00:07:07,840

because of that it lets us study

124

00:07:13,110 --> 00:07:10,639

combustion and pollution and how things

125

00:07:15,510 --> 00:07:13,120

burn more efficiently up in space so the

126
00:07:17,029 --> 00:07:15,520
reason we do experiments up in space is

127
00:07:19,189 --> 00:07:17,039
because we can do things there that we

128
00:07:21,510 --> 00:07:19,199
can we can't do down here

129
00:07:23,589 --> 00:07:21,520
and because the things that we learn up

130
00:07:25,909 --> 00:07:23,599
there in space are things that come

131
00:07:28,070 --> 00:07:25,919
right back home down here to earth i've

132
00:07:29,350 --> 00:07:28,080
got a couple more pictures to show you

133
00:07:30,950 --> 00:07:29,360
there's one one of my favorite

134
00:07:33,830 --> 00:07:30,960
experiments it looks uh

135
00:07:35,909 --> 00:07:33,840
kind of like a um it's really just a

136
00:07:38,870 --> 00:07:35,919
liquid in a container but again we're

137
00:07:41,110 --> 00:07:38,880
seeing what do liquids really want to do

138
00:07:42,550 --> 00:07:41,120

you're also seeing what does karen's

139

00:07:44,869 --> 00:07:42,560

hair want to do

140

00:07:46,710 --> 00:07:44,879

it's pretty wild

141

00:07:49,510 --> 00:07:46,720

i think it's pretty neat to see

142

00:07:51,589 --> 00:07:49,520

how these things act in microgravity and

143

00:07:53,350 --> 00:07:51,599

because the forces are so tiny down here

144

00:07:55,430 --> 00:07:53,360

on the earth they're hard to study but

145

00:07:56,469 --> 00:07:55,440

up in space it's easier and so the

146

00:07:58,629 --> 00:07:56,479

things that we're learning from the

147

00:08:01,430 --> 00:07:58,639

experiment that karen was doing was for

148

00:08:03,110 --> 00:08:01,440

example when we're on our way to mars

149

00:08:05,430 --> 00:08:03,120

i personally would like to know how much

150

00:08:07,029 --> 00:08:05,440

gas we have in our tank and if the gas

151

00:08:08,950 --> 00:08:07,039

is all floating well how are we going to

152

00:08:10,710 --> 00:08:08,960

know that well in the experiment karen

153

00:08:13,510 --> 00:08:10,720

was doing when we changed the angle of

154

00:08:15,430 --> 00:08:13,520

the container just by like three degrees

155

00:08:17,510 --> 00:08:15,440

so small you can't even see it

156

00:08:18,710 --> 00:08:17,520

all of that liquid all of our fuel is

157

00:08:20,950 --> 00:08:18,720

going to be in one place in the

158

00:08:22,629 --> 00:08:20,960

container that's so important to learn

159

00:08:24,230 --> 00:08:22,639

about so we're learning all sorts of

160

00:08:26,070 --> 00:08:24,240

things that we can't hear find out down

161

00:08:28,869 --> 00:08:26,080

here on the ground and we're learning

162

00:08:31,350 --> 00:08:28,879

about ourselves about our bodies and how

163

00:08:33,269 --> 00:08:31,360

people live in space up on the space

164

00:08:36,389 --> 00:08:33,279

station it's our test bed for

165

00:08:39,589 --> 00:08:36,399

exploration because we are going back to

166

00:08:41,990 --> 00:08:39,599

the moon to asteroids and onto mars and

167

00:08:43,350 --> 00:08:42,000

we're not ready we are not ready yet and

168

00:08:45,030 --> 00:08:43,360

that's why we have the space station and

169

00:08:46,070 --> 00:08:45,040

we do these experiments one of the

170

00:08:48,230 --> 00:08:46,080

things we need to find out is what

171

00:08:50,230 --> 00:08:48,240

happens to people up there you know we

172

00:08:51,910 --> 00:08:50,240

don't walk around on our feet our brains

173

00:08:54,630 --> 00:08:51,920

don't get that message that they need to

174

00:08:56,949 --> 00:08:54,640

build bone and so we actually lose a lot

175

00:08:58,630 --> 00:08:56,959

of bone and muscle while we're up there

176

00:08:59,430 --> 00:08:58,640

i think we have a picture of koichi on

177

00:09:01,190 --> 00:08:59,440

our

178

00:09:04,550 --> 00:09:01,200

exercise machine

179

00:09:06,870 --> 00:09:04,560

and by doing exercise up there it turns

180

00:09:08,550 --> 00:09:06,880

out that we don't actually lose as much

181

00:09:11,509 --> 00:09:08,560

bone and muscle and in fact i can speak

182

00:09:13,990 --> 00:09:11,519

for my own results i came back without

183

00:09:15,750 --> 00:09:14,000

losing i did lose some bone but i came

184

00:09:16,870 --> 00:09:15,760

back really with the same amount that i

185

00:09:18,870 --> 00:09:16,880

left with

186

00:09:21,750 --> 00:09:18,880

and here's the secret

187

00:09:24,470 --> 00:09:21,760

exercise yes exercise so we're learning

188

00:09:27,110 --> 00:09:24,480

all about how to keep to build uh strong

189

00:09:29,110 --> 00:09:27,120

bones for mars and at the same time we

190

00:09:31,670 --> 00:09:29,120

need strong bones down here too these

191

00:09:33,269 --> 00:09:31,680

kids need strong bones and it comes down

192

00:09:35,110 --> 00:09:33,279

to exercise and other things so the

193

00:09:37,110 --> 00:09:35,120

experiments again that we do up there

194

00:09:39,350 --> 00:09:37,120

we're getting to understand how to do

195

00:09:42,150 --> 00:09:39,360

them we're understanding more about life

196

00:09:43,829 --> 00:09:42,160

down here and last but not least i'd

197

00:09:45,190 --> 00:09:43,839

just like to show a picture of koichi

198

00:09:47,110 --> 00:09:45,200

and his crew because we're going to meet

199

00:09:49,910 --> 00:09:47,120

koichi but the other folks are probably

200

00:09:52,630 --> 00:09:49,920

pretty busy doing uh science experiments

201
00:09:54,470 --> 00:09:52,640
but um let's see uh so we've got koichi

202
00:09:56,310 --> 00:09:54,480
there you see the six of them we go up

203
00:09:58,870 --> 00:09:56,320
in groups of three

204
00:10:00,949 --> 00:09:58,880
and then when we get up there there'll

205
00:10:04,310 --> 00:10:00,959
already be three people up there

206
00:10:07,350 --> 00:10:04,320
so koichi is going to come home with his

207
00:10:09,829 --> 00:10:07,360
two russian cosmonaut crewmates and when

208
00:10:11,269 --> 00:10:09,839
uh after he lands another three-person

209
00:10:13,670 --> 00:10:11,279
crew will go up and we'll be a

210
00:10:16,829 --> 00:10:13,680
six-person crew again so at any one

211
00:10:20,150 --> 00:10:16,839
moment there are always six people doing

212
00:10:21,750 --> 00:10:20,160
science making amazing things happen and

213
00:10:23,590 --> 00:10:21,760

being just plain old people and doing

214

00:10:25,910 --> 00:10:23,600

things like playing music on the space

215

00:10:28,230 --> 00:10:25,920

station great thank you katie

216

00:10:30,150 --> 00:10:28,240

so now i want to kind of talk about what

217

00:10:32,470 --> 00:10:30,160

brought us all here together today and

218

00:10:34,389 --> 00:10:32,480

that individual is jamie leupold and she

219

00:10:35,990 --> 00:10:34,399

has a very special program at pearl hall

220

00:10:38,389 --> 00:10:36,000

elementary called building cultural

221

00:10:40,230 --> 00:10:38,399

bridges so jamie why don't you share

222

00:10:41,030 --> 00:10:40,240

with us a little bit about your project

223

00:10:43,269 --> 00:10:41,040

okay

224

00:10:46,470 --> 00:10:43,279

it is called building cultural bridges

225

00:10:48,150 --> 00:10:46,480

and this whole idea started whenever

226

00:10:49,829 --> 00:10:48,160

my teaching partner

227

00:10:51,590 --> 00:10:49,839

who is my mom

228

00:10:53,509 --> 00:10:51,600

we started talking about how can we make

229

00:10:55,430 --> 00:10:53,519

the music education

230

00:10:57,990 --> 00:10:55,440

requirements for texas more relevant to

231

00:11:00,150 --> 00:10:58,000

kids in our community and so we thought

232

00:11:01,590 --> 00:11:00,160

well if we have these musicians come to

233

00:11:03,350 --> 00:11:01,600

the school and people from these

234

00:11:05,750 --> 00:11:03,360

international countries this would be

235

00:11:07,509 --> 00:11:05,760

really fabulous so we approached nasa we

236

00:11:08,949 --> 00:11:07,519

approached the houston symphony other

237

00:11:11,190 --> 00:11:08,959

arts organizations who had an

238

00:11:13,350 --> 00:11:11,200

international presence in houston and

239

00:11:16,550 --> 00:11:13,360

they all agreed to give this a try about

240

00:11:18,710 --> 00:11:16,560

16 years ago to bring one or two guests

241

00:11:20,389 --> 00:11:18,720

to the school per year to see about

242

00:11:22,470 --> 00:11:20,399

letting kids interview them about their

243

00:11:23,829 --> 00:11:22,480

careers their culture and their

244

00:11:25,670 --> 00:11:23,839

literature

245

00:11:27,269 --> 00:11:25,680

and folk music because those are things

246

00:11:30,310 --> 00:11:27,279

that people from all countries have in

247

00:11:33,269 --> 00:11:30,320

common and now here we are 16 years

248

00:11:36,069 --> 00:11:33,279

later and about 75 guests from 27

249

00:11:38,790 --> 00:11:36,079

countries have come to the school and is

250

00:11:41,030 --> 00:11:38,800

and they are interviewed by children

251

00:11:42,949 --> 00:11:41,040

teams of third or fourth graders right

252

00:11:45,509 --> 00:11:42,959

there and you're seeing w st jacques

253

00:11:48,470 --> 00:11:45,519

from from this canadian space agency who

254

00:11:50,949 --> 00:11:48,480

was just at our school this year and

255

00:11:52,550 --> 00:11:50,959

astronauts from every major space agency

256

00:11:54,710 --> 00:11:52,560

of the international space station

257

00:11:56,310 --> 00:11:54,720

partners has been to the school

258

00:11:59,190 --> 00:11:56,320

and the children learned their folk

259

00:12:01,350 --> 00:11:59,200

songs and koichi was one of the ones who

260

00:12:03,670 --> 00:12:01,360

came to our school he's been there twice

261

00:12:06,310 --> 00:12:03,680

and on his first visit

262

00:12:08,150 --> 00:12:06,320

they he brought his culture to us for

263

00:12:10,629 --> 00:12:08,160

the first time for kids in texas to

264

00:12:12,949 --> 00:12:10,639

experience a deep traditional japanese

265

00:12:14,310 --> 00:12:12,959

culture and he brought

266

00:12:17,670 --> 00:12:14,320

his book

267

00:12:19,350 --> 00:12:17,680

chris hadfield found it in japan and so

268

00:12:21,030 --> 00:12:19,360

today we're very excited to celebrate

269

00:12:22,710 --> 00:12:21,040

that with those of you who are in in

270

00:12:24,870 --> 00:12:22,720

japan today joining us at tenure

271

00:12:27,350 --> 00:12:24,880

university to have this unique

272

00:12:30,310 --> 00:12:27,360

instrument um bringing to life the

273

00:12:31,829 --> 00:12:30,320

cultures and sharing it across the world

274

00:12:35,430 --> 00:12:31,839

through the curriculum we study at

275

00:12:37,269 --> 00:12:35,440

school and it brings such richness to

276

00:12:39,750 --> 00:12:37,279

our school and so the books they shared

277

00:12:41,750 --> 00:12:39,760

we also have the the copies of them in

278

00:12:43,910 --> 00:12:41,760

our school and so this is koichi's

279

00:12:46,150 --> 00:12:43,920

favorite book from his childhood that we

280

00:12:48,790 --> 00:12:46,160

have at the school for kids to look at

281

00:12:50,870 --> 00:12:48,800

and as well as learning the folk songs

282

00:12:53,110 --> 00:12:50,880

and so we partnered with houston

283

00:12:54,949 --> 00:12:53,120

symphony and

284

00:12:57,190 --> 00:12:54,959

this brought our first experience with

285

00:12:59,590 --> 00:12:57,200

russian culture to our kids and sergey

286

00:13:01,190 --> 00:12:59,600

galperin who is a russian violinist a

287

00:13:03,590 --> 00:13:01,200

russian-born violinist for the houston

288

00:13:05,750 --> 00:13:03,600

symphony came and performed music for

289

00:13:08,310 --> 00:13:05,760

our students and shared

290

00:13:10,069 --> 00:13:08,320

the music of his culture and we've done

291

00:13:12,550 --> 00:13:10,079

many many performances

292

00:13:14,470 --> 00:13:12,560

blending the arts and sciences of our

293

00:13:16,629 --> 00:13:14,480

curriculum in our schools and blending

294

00:13:18,710 --> 00:13:16,639

the arts and sciences of

295

00:13:20,550 --> 00:13:18,720

music moving from stem

296

00:13:22,790 --> 00:13:20,560

to bringing in the arts and moving that

297

00:13:23,910 --> 00:13:22,800

into steam which i know something we're

298

00:13:25,509 --> 00:13:23,920

hearing a little bit more coming from

299

00:13:28,230 --> 00:13:25,519

headquarters at nasa about in the

300

00:13:30,310 --> 00:13:28,240

education program very exciting

301
00:13:31,829 --> 00:13:30,320
so i'm going to ask sergey if he would

302
00:13:33,990 --> 00:13:31,839
please talk a little bit about his

303
00:13:35,670 --> 00:13:34,000
experiences with our programs at school

304
00:13:37,430 --> 00:13:35,680
with the houston symphony and the the

305
00:13:40,310 --> 00:13:37,440
partnerships they've had for

306
00:13:42,230 --> 00:13:40,320
a long time with nasa

307
00:13:44,389 --> 00:13:42,240
well i little did i know what i got

308
00:13:47,269 --> 00:13:44,399
myself into

309
00:13:49,269 --> 00:13:47,279
when jamie invited me to play for school

310
00:13:50,870 --> 00:13:49,279
but it's a terrific project i'm very

311
00:13:54,310 --> 00:13:50,880
proud to be part of it

312
00:13:55,990 --> 00:13:54,320
i was born in moscow i went to move to

313
00:13:57,030 --> 00:13:56,000

new york city and went to juilliard

314

00:13:59,430 --> 00:13:57,040

school

315

00:14:00,629 --> 00:13:59,440

and joined the houston symphony 17 years

316

00:14:01,670 --> 00:14:00,639

ago

317

00:14:04,310 --> 00:14:01,680

and

318

00:14:06,870 --> 00:14:04,320

this sort of trifecta that we are doing

319

00:14:08,310 --> 00:14:06,880

with the houston symphony nasa and

320

00:14:09,829 --> 00:14:08,320

cultural bridges

321

00:14:12,389 --> 00:14:09,839

is really a

322

00:14:15,990 --> 00:14:12,399

a fantastic project

323

00:14:19,350 --> 00:14:16,000

so the houston symphony and nasa has had

324

00:14:21,430 --> 00:14:19,360

a long history of commitment

325

00:14:24,069 --> 00:14:21,440

where the technology means that meets

326

00:14:24,949 --> 00:14:24,079

the arts last year we went

327

00:14:26,150 --> 00:14:24,959

to

328

00:14:28,389 --> 00:14:26,160

great britain

329

00:14:31,829 --> 00:14:28,399

and performed the hd

330

00:14:35,750 --> 00:14:31,839

odyssey all over

331

00:14:39,030 --> 00:14:35,760

that great nation to to such a success

332

00:14:41,030 --> 00:14:39,040

that folks in cleveland in sydney in

333

00:14:43,670 --> 00:14:41,040

rotterdam all over the world want to see

334

00:14:45,590 --> 00:14:43,680

that dvd they want to see what nasa does

335

00:14:47,990 --> 00:14:45,600

they want to see how houston symphony

336

00:14:48,949 --> 00:14:48,000

does and so we are

337

00:14:51,269 --> 00:14:48,959

i think

338

00:14:53,990 --> 00:14:51,279

going forward with more projects between

339

00:14:55,590 --> 00:14:54,000

the houston symphony and nasa especially

340

00:14:57,030 --> 00:14:55,600

during our centennial season with the

341

00:14:59,590 --> 00:14:57,040

houston symphony

342

00:15:01,189 --> 00:14:59,600

so that's those are the two links that

343

00:15:03,350 --> 00:15:01,199

are very important we're close we're

344

00:15:05,350 --> 00:15:03,360

only an hour away from the whole to the

345

00:15:07,670 --> 00:15:05,360

to the to the command center here and

346

00:15:10,310 --> 00:15:07,680

then the culture bridges that third

347

00:15:12,150 --> 00:15:10,320

aspect of this collaboration is is

348

00:15:14,710 --> 00:15:12,160

terrific i mean this young lady over

349

00:15:16,389 --> 00:15:14,720

here deserves a a medal of honor i mean

350

00:15:18,629 --> 00:15:16,399

she brings these kids

351
00:15:19,509 --> 00:15:18,639
uh who would have otherwise never have

352
00:15:20,870 --> 00:15:19,519
seen

353
00:15:22,949 --> 00:15:20,880
uh

354
00:15:25,110 --> 00:15:22,959
all of you and and have been able to

355
00:15:28,389 --> 00:15:25,120
participate in such a magnificent

356
00:15:30,870 --> 00:15:28,399
collaboration and so if a nobel prize or

357
00:15:33,509 --> 00:15:30,880
a composer or an astronaut will come

358
00:15:35,189 --> 00:15:33,519
from her institution this is the person

359
00:15:37,749 --> 00:15:35,199
to send the uh

360
00:15:38,870 --> 00:15:37,759
the the congrats letters to

361
00:15:40,629 --> 00:15:38,880
so

362
00:15:43,829 --> 00:15:40,639
well thank you yeah the collaborations

363
00:15:44,870 --> 00:15:43,839

have been wonderful and it's been a

364

00:15:46,710 --> 00:15:44,880

triple

365

00:15:48,949 --> 00:15:46,720

whammy here for us having three music

366

00:15:50,550 --> 00:15:48,959

educators i know that our seth fuel is

367

00:15:53,110 --> 00:15:50,560

running the show back at pearl hall

368

00:15:55,110 --> 00:15:53,120

elementary and we're very excited to

369

00:15:57,910 --> 00:15:55,120

share students here and students at our

370

00:16:00,230 --> 00:15:57,920

school with the world and with nasa and

371

00:16:01,990 --> 00:16:00,240

the symphony well that's a perfect segue

372

00:16:04,870 --> 00:16:02,000

why don't we go ahead and prepare for

373

00:16:06,470 --> 00:16:04,880

our first song so squire if you're ready

374

00:16:08,389 --> 00:16:06,480

and sergey perhaps you would like to

375

00:16:10,790 --> 00:16:08,399

share with us about our first song

376

00:16:15,350 --> 00:16:10,800

kalinka

377

00:16:16,949 --> 00:16:15,360

is a very very very russian song and for

378

00:16:19,030 --> 00:16:16,959

those on the space

379

00:16:20,790 --> 00:16:19,040

station that speak russian

380

00:16:25,030 --> 00:16:20,800

dobridge

381

00:16:29,509 --> 00:16:26,790

that was not bad words that just

382

00:16:30,790 --> 00:16:29,519

welcomed them into our discussion

383

00:16:33,509 --> 00:16:30,800

and uh

384

00:16:36,949 --> 00:16:33,519

it was written back in 1860 and i don't

385

00:16:39,030 --> 00:16:36,959

think the gentleman who wrote it uh as

386

00:16:41,350 --> 00:16:39,040

often it happens had the idea that what

387

00:16:44,310 --> 00:16:41,360

he wrote as an entertainment fong song

388

00:16:47,430 --> 00:16:44,320

folk song became a standard

389

00:16:49,350 --> 00:16:47,440

uh for the for for the russian people up

390

00:16:51,269 --> 00:16:49,360

to this date so we're going to play for

391

00:16:52,949 --> 00:16:51,279

you probably the most famous russian

392

00:16:53,910 --> 00:16:52,959

song that you've heard

393

00:16:59,829 --> 00:16:53,920

uh

394

00:17:03,590 --> 00:16:59,839

the ballerinas or or or figure skaters

395

00:17:05,990 --> 00:17:03,600

dance you've heard it during uh

396

00:17:08,390 --> 00:17:06,000

trips to russia when russian bear dances

397

00:17:09,510 --> 00:17:08,400

i mean it is the quintessential russian

398

00:17:26,630 --> 00:17:09,520

song

399

00:17:26,640 --> 00:18:15,750

hey

400

00:18:15,760 --> 00:18:44,310

oh

401
00:18:44,320 --> 00:19:11,510
foreign

402
00:19:11,520 --> 00:19:33,190
come on

403
00:19:39,590 --> 00:19:35,990
that was wonderful thank you so much

404
00:19:41,510 --> 00:19:39,600
excellent job choir yeah all right so in

405
00:19:43,190 --> 00:19:41,520
a few minutes we're going to have a very

406
00:19:44,710 --> 00:19:43,200
special opportunity to speak with

407
00:19:46,630 --> 00:19:44,720
commander koichi akata on the

408
00:19:48,710 --> 00:19:46,640
international space station so while

409
00:19:51,590 --> 00:19:48,720
we're waiting for that to occur i'd like

410
00:19:54,070 --> 00:19:51,600
to give students at pearl hall and also

411
00:19:55,669 --> 00:19:54,080
at henry university a chance to ask

412
00:19:58,230 --> 00:19:55,679
katie a few questions about her

413
00:20:00,870 --> 00:19:58,240

experiences in flight so we are going to

414

00:20:02,950 --> 00:20:00,880

begin with our first school so pearl

415

00:20:07,909 --> 00:20:02,960

hall if you could please your microphone

416

00:20:12,390 --> 00:20:08,630

hi

417

00:20:14,870 --> 00:20:12,400

my name is laura and my question is

418

00:20:18,549 --> 00:20:14,880

what is the best adventure you've

419

00:20:21,350 --> 00:20:18,559

experienced as an astronaut

420

00:20:23,590 --> 00:20:21,360

well laura some people think that launch

421

00:20:25,510 --> 00:20:23,600

is the is the is the most important

422

00:20:28,390 --> 00:20:25,520

thing that we do and it is actually like

423

00:20:30,310 --> 00:20:28,400

really really really exciting

424

00:20:32,710 --> 00:20:30,320

but i will tell you that living on the

425

00:20:35,430 --> 00:20:32,720

international space station for almost

426

00:20:37,430 --> 00:20:35,440

six months i loved it up there and if i

427

00:20:39,669 --> 00:20:37,440

could have brought my family with me i

428

00:20:41,270 --> 00:20:39,679

have a son who's about 13 he was 10 when

429

00:20:43,350 --> 00:20:41,280

i went if i could have bought brought

430

00:20:45,190 --> 00:20:43,360

him and my husband with me i wouldn't

431

00:20:47,270 --> 00:20:45,200

have wanted to come home it was the best

432

00:20:49,029 --> 00:20:47,280

adventure ever and i can't wait to go

433

00:20:50,549 --> 00:20:49,039

back

434

00:20:52,549 --> 00:20:50,559

all right thank you portal hall let's go

435

00:21:00,070 --> 00:20:52,559

to henry university please emit your

436

00:21:06,549 --> 00:21:03,270

it is say that stained space

437

00:21:08,710 --> 00:21:06,559

can be raised to a chance of all for

438

00:21:12,470 --> 00:21:08,720

certain individuals

439

00:21:16,549 --> 00:21:12,480

did you feel did you feel any spiritual

440

00:21:20,630 --> 00:21:16,559

or religious feeling

441

00:21:22,230 --> 00:21:20,640

any spiritual or religious uh feeling

442

00:21:24,710 --> 00:21:22,240

you know it's gonna be different for

443

00:21:26,630 --> 00:21:24,720

every single person i you can plan what

444

00:21:28,149 --> 00:21:26,640

you'll feel like you can think you know

445

00:21:29,510 --> 00:21:28,159

what it might feel like but then when

446

00:21:32,710 --> 00:21:29,520

you're actually

447

00:21:34,070 --> 00:21:32,720

in a space station orbiting the earth

448

00:21:36,630 --> 00:21:34,080

looking down

449

00:21:38,950 --> 00:21:36,640

seeing your country and in fact i

450

00:21:40,950 --> 00:21:38,960

studied very often in japan for my

451
00:21:43,029 --> 00:21:40,960
mission so it's very very happy to look

452
00:21:45,110 --> 00:21:43,039
down and see japan when you look down

453
00:21:46,789 --> 00:21:45,120
and you realize that everyone you know

454
00:21:48,710 --> 00:21:46,799
is down there

455
00:21:51,190 --> 00:21:48,720
it's wonderful to be up in space and at

456
00:21:53,990 --> 00:21:51,200
the same time it's it's um

457
00:21:56,710 --> 00:21:54,000
i i felt so so privileged to have that

458
00:21:58,789 --> 00:21:56,720
viewpoint and actually to realize that

459
00:22:00,710 --> 00:21:58,799
i don't actually come from a country i

460
00:22:02,870 --> 00:22:00,720
come from the earth and that our earth

461
00:22:05,350 --> 00:22:02,880
is in the neighborhood of space

462
00:22:07,270 --> 00:22:05,360
and it's a wonderful place

463
00:22:11,990 --> 00:22:07,280

thank you all right pearl hall you're up

464

00:22:17,110 --> 00:22:15,430

hi i am daisy and my question is

465

00:22:19,029 --> 00:22:17,120

we have rules we have to follow at

466

00:22:22,710 --> 00:22:19,039

school what roles do you have to follow

467

00:22:24,070 --> 00:22:22,720

while you're living on the iss

468

00:22:27,029 --> 00:22:24,080

rules well you know we don't we don't

469

00:22:28,549 --> 00:22:27,039

actually have to follow any rules at all

470

00:22:30,950 --> 00:22:28,559

not true you know we have to follow

471

00:22:33,110 --> 00:22:30,960

rules just like you do and

472

00:22:35,029 --> 00:22:33,120

up there it it it's really clear that

473

00:22:36,549 --> 00:22:35,039

safety is the most important thing

474

00:22:38,830 --> 00:22:36,559

because we're in kind of a dangerous

475

00:22:42,470 --> 00:22:38,840

place

476
00:22:44,310 --> 00:22:42,480
right makes me realize that being being

477
00:22:45,909 --> 00:22:44,320
following rules there's a reason for

478
00:22:49,350 --> 00:22:45,919
them and even though i actually don't

479
00:22:51,270 --> 00:22:49,360
always feel like following the rules

480
00:22:53,110 --> 00:22:51,280
it's plain old important and it just has

481
00:22:55,110 --> 00:22:53,120
to be done and you just follow the rules

482
00:22:56,789 --> 00:22:55,120
and get that part done and get on with

483
00:22:58,710 --> 00:22:56,799
whatever work you're trying to do there

484
00:23:00,789 --> 00:22:58,720
so we have lots of rules up there as

485
00:23:03,190 --> 00:23:00,799
well and pretty much we have to do what

486
00:23:05,029 --> 00:23:03,200
we're told even commander wakata i think

487
00:23:07,510 --> 00:23:05,039
will tell you that

488
00:23:11,270 --> 00:23:07,520

all right tender university please tell

489

00:23:15,830 --> 00:23:12,710

hi

490

00:23:18,789 --> 00:23:15,840

my name is nagami

491

00:23:21,350 --> 00:23:18,799

and my question is

492

00:23:25,190 --> 00:23:21,360

is there anything that

493

00:23:26,950 --> 00:23:25,200

you thought was an advantage or

494

00:23:27,909 --> 00:23:26,960

disadvantage

495

00:23:30,390 --> 00:23:27,919

about

496

00:23:32,230 --> 00:23:30,400

being a female

497

00:23:33,590 --> 00:23:32,240

external

498

00:23:36,870 --> 00:23:33,600

so

499

00:23:38,310 --> 00:23:36,880

being being a woman astronaut up there

500

00:23:40,070 --> 00:23:38,320

it's just nice to have lots of different

501
00:23:42,549 --> 00:23:40,080
kinds of people up there i will say in

502
00:23:45,430 --> 00:23:42,559
general um we can be

503
00:23:46,950 --> 00:23:45,440
smaller than some of the guys and down

504
00:23:48,710 --> 00:23:46,960
here that can be a disadvantage where

505
00:23:51,029 --> 00:23:48,720
i'm always having to stand on a step to

506
00:23:53,190 --> 00:23:51,039
be tall enough right

507
00:23:55,510 --> 00:23:53,200
but then up in space i'm tall enough so

508
00:23:57,350 --> 00:23:55,520
there's advantages and disadvantages but

509
00:23:59,190 --> 00:23:57,360
what i find is sometimes the equipment

510
00:24:02,230 --> 00:23:59,200
is actually made for people who are

511
00:24:03,750 --> 00:24:02,240
bigger than i am or i'm left-handed and

512
00:24:05,590 --> 00:24:03,760
i find the equipment is made for people

513
00:24:08,149 --> 00:24:05,600

who use their right hand more

514

00:24:11,430 --> 00:24:08,159

and what i think is important is having

515

00:24:13,350 --> 00:24:11,440

lots of women and minorities

516

00:24:15,830 --> 00:24:13,360

going to school getting the tools that

517

00:24:18,310 --> 00:24:15,840

they need to be the engineers to design

518

00:24:20,470 --> 00:24:18,320

that space station and to design the

519

00:24:23,430 --> 00:24:20,480

rockets that we'll bring to mars and the

520

00:24:25,110 --> 00:24:23,440

place we'll live on mars i want women

521

00:24:27,350 --> 00:24:25,120

and other minorities minorities to

522

00:24:29,990 --> 00:24:27,360

design those things so that when they

523

00:24:31,430 --> 00:24:30,000

get there everything will fit them

524

00:24:33,269 --> 00:24:31,440

all right great all right we're going to

525

00:24:35,110 --> 00:24:33,279

take another question from pearl hall

526

00:24:41,350 --> 00:24:35,120

elementary what's your next question for

527

00:24:46,230 --> 00:24:44,310

my name is myra and my question is if

528

00:24:49,990 --> 00:24:46,240

you could be the first person on mars

529

00:24:53,669 --> 00:24:51,750

well you know i started to think well

530

00:24:54,710 --> 00:24:53,679

okay there would be my son and my

531

00:24:56,230 --> 00:24:54,720

husband

532

00:24:58,390 --> 00:24:56,240

but chances are they're going to be too

533

00:24:59,909 --> 00:24:58,400

heavy and i can't bring those things

534

00:25:02,390 --> 00:24:59,919

you know i'd love to say i'd bring my

535

00:25:03,430 --> 00:25:02,400

flute you know which i have here or that

536

00:25:05,029 --> 00:25:03,440

i would

537

00:25:06,549 --> 00:25:05,039

bring some things like that that i just

538

00:25:09,510 --> 00:25:06,559

love but first we're going to bring the

539

00:25:12,470 --> 00:25:09,520

equipment that we need to explore mars

540

00:25:15,350 --> 00:25:12,480

to live there safely and to be able to

541

00:25:16,789 --> 00:25:15,360

return home and to send data home so

542

00:25:18,789 --> 00:25:16,799

that everyone back on earth can

543

00:25:21,510 --> 00:25:18,799

understand what it's like on mars so

544

00:25:23,669 --> 00:25:21,520

that we can then send more people safely

545

00:25:26,390 --> 00:25:23,679

and then go to places even beyond mars

546

00:25:27,909 --> 00:25:26,400

so i bring the things that we need

547

00:25:29,350 --> 00:25:27,919

good all right well we have a few

548

00:25:31,430 --> 00:25:29,360

minutes before we're going to be

549

00:25:33,510 --> 00:25:31,440

connected with koichi so i actually have

550

00:25:36,149 --> 00:25:33,520

a question for you when you were on the

551
00:25:37,830 --> 00:25:36,159
international space station did you make

552
00:25:41,830 --> 00:25:37,840
a new discovery or does someone within

553
00:25:44,230 --> 00:25:41,840
your team make a new discovery in space

554
00:25:46,070 --> 00:25:44,240
here's something i think unexpected

555
00:25:48,470 --> 00:25:46,080
about new discoveries is

556
00:25:50,470 --> 00:25:48,480
we we see tv programs we think that one

557
00:25:52,789 --> 00:25:50,480
person makes a discovery

558
00:25:54,630 --> 00:25:52,799
people make discoveries together

559
00:25:56,870 --> 00:25:54,640
when they work together and so we

560
00:25:59,590 --> 00:25:56,880
actually did have a pretty exciting

561
00:26:02,070 --> 00:25:59,600
discovery when i was on board in terms

562
00:26:04,870 --> 00:26:02,080
of fluids and figuring out what do

563
00:26:06,950 --> 00:26:04,880

liquids really want to to do and i

564

00:26:08,549 --> 00:26:06,960

mentioned it earlier understanding

565

00:26:10,630 --> 00:26:08,559

more things about how to design that

566

00:26:12,230 --> 00:26:10,640

zero-g fuel tank so that we have enough

567

00:26:16,549 --> 00:26:12,240

fuel to get to mars so we know how much

568

00:26:19,590 --> 00:26:17,590

all right it looks like we're going to

569

00:26:20,950 --> 00:26:19,600

begin our event so let's stand by just a

570

00:26:22,870 --> 00:26:20,960

few seconds and we're going to be joined

571

00:26:24,870 --> 00:26:22,880

with commander koichi wakata on the

572

00:26:26,870 --> 00:26:24,880

international space station

573

00:26:28,630 --> 00:26:26,880

all right well commander kawada koichi

574

00:26:30,950 --> 00:26:28,640

wakata is on the international space

575

00:26:33,510 --> 00:26:30,960

station traveling at 17

576

00:26:36,789 --> 00:26:33,520

500 miles per hour they experience a

577

00:26:39,029 --> 00:26:36,799

sunrise or sunset every 45 minutes and

578

00:26:40,549 --> 00:26:39,039

so it's a beautiful beautiful experience

579

00:26:43,110 --> 00:26:40,559

for the astronauts and we're very

580

00:26:44,789 --> 00:26:43,120

fortunate to have him join us today it's

581

00:26:46,310 --> 00:26:44,799

not every day you get to speak to an

582

00:26:56,789 --> 00:26:46,320

astronaut on the international space

583

00:27:00,630 --> 00:26:58,789

can we hear koichi up

584

00:27:02,390 --> 00:27:00,640

all right we're we're waiting we're

585

00:27:06,950 --> 00:27:02,400

standing by we're waiting this is

586

00:27:12,470 --> 00:27:10,710

houston station i am ready for the event

587

00:27:14,149 --> 00:27:12,480

music and space participants this is

588

00:27:16,149 --> 00:27:14,159

mission control houston please call

589

00:27:18,470 --> 00:27:16,159

station for a voice check

590

00:27:20,549 --> 00:27:18,480

all right iss commander koichi wakata

591

00:27:24,710 --> 00:27:20,559

this is patricia moore at johnson space

592

00:27:28,710 --> 00:27:26,389

patricia

593

00:27:30,710 --> 00:27:28,720

i have you loud and clear i'm glad to

594

00:27:32,149 --> 00:27:30,720

join you for this event

595

00:27:34,630 --> 00:27:32,159

great

596

00:27:37,909 --> 00:27:34,640

thank you koichi here at the johnson

597

00:27:39,590 --> 00:27:37,919

space center we have several folks on on

598

00:27:43,110 --> 00:27:39,600

stage with us we've got the students

599

00:27:45,750 --> 00:27:43,120

here at pearl hall elementary we have

600

00:27:48,710 --> 00:27:45,760

katie at coleman here we have their

601
00:27:51,350 --> 00:27:48,720
educator jamie leupold we have sergey

602
00:27:53,029 --> 00:27:51,360
galperin and we also have kenji williams

603
00:27:55,029 --> 00:27:53,039
and so i wanted to let you know everyone

604
00:27:56,950 --> 00:27:55,039
we have and i'd like to give you a

605
00:27:59,350 --> 00:27:56,960
chance to share with us what's going on

606
00:28:01,669 --> 00:27:59,360
on the space station a little bit about

607
00:28:03,510 --> 00:28:01,679
the special show instrument you have on

608
00:28:05,269 --> 00:28:03,520
the international space station and then

609
00:28:10,549 --> 00:28:05,279
i hear you're going to play a duet for

610
00:28:15,430 --> 00:28:13,830
yes thank you very much for helping out

611
00:28:17,909 --> 00:28:15,440
and

612
00:28:20,789 --> 00:28:17,919
yeah this is the uh

613
00:28:22,149 --> 00:28:20,799

show

614

00:28:24,710 --> 00:28:22,159

and uh

615

00:28:26,389 --> 00:28:24,720

this was launched on the spacex three uh

616

00:28:28,950 --> 00:28:26,399

dragon spacecraft

617

00:28:31,350 --> 00:28:28,960

actually until i got to space i never

618

00:28:34,230 --> 00:28:31,360

saw touch this instrument so it's quite

619

00:28:38,630 --> 00:28:34,240

an honor to be able to see this and then

620

00:28:43,350 --> 00:28:40,950

well thank you koichi so i'd like to

621

00:28:46,149 --> 00:28:43,360

give kenji an opportunity to talk with

622

00:28:47,990 --> 00:28:46,159

you a little bit um you're going um to

623

00:28:49,669 --> 00:28:48,000

play a special duet for us so maybe you

624

00:28:51,909 --> 00:28:49,679

want to start off by talking a little

625

00:28:54,230 --> 00:28:51,919

bit about the instrument and then maybe

626
00:28:57,669 --> 00:28:54,240
um kenji can jump in and you guys can

627
00:29:03,190 --> 00:29:00,789
yeah kenji uh nice to talk with you and

628
00:29:05,830 --> 00:29:03,200
uh this musical instrument show

629
00:29:09,190 --> 00:29:05,840
actually this is designed to uh look

630
00:29:11,430 --> 00:29:09,200
like a mythical uh bird a phoenix

631
00:29:13,110 --> 00:29:11,440
uh as it rests with its

632
00:29:15,029 --> 00:29:13,120
360

633
00:29:16,950 --> 00:29:15,039
wings folded

634
00:29:19,909 --> 00:29:16,960
the instrument shaw

635
00:29:20,950 --> 00:29:19,919
show was first introduced to japan from

636
00:29:23,110 --> 00:29:20,960
china

637
00:29:24,310 --> 00:29:23,120
back in the 8th century

638
00:29:27,510 --> 00:29:24,320

and then

639

00:29:31,110 --> 00:29:27,520

actually the sound making uh

640

00:29:33,669 --> 00:29:31,120

uh mechanism of show is pretty much the

641

00:29:37,590 --> 00:29:33,679

same as that of a harmonica

642

00:29:40,549 --> 00:29:37,600

and the uh the spirit of uh show

643

00:29:41,590 --> 00:29:40,559

represents the the spirit of fire rising

644

00:29:47,590 --> 00:29:41,600

from the

645

00:29:49,990 --> 00:29:47,600

so uh i am so glad that i am going to be

646

00:29:55,029 --> 00:29:50,000

able to play this musical instrument

647

00:30:00,149 --> 00:29:58,470

well koichi i'm extremely honored to

648

00:30:01,029 --> 00:30:00,159

perform with you and collaborate with

649

00:30:05,669 --> 00:30:01,039

you

650

00:30:07,190 --> 00:30:05,679

information about the show instrument

651

00:30:09,110 --> 00:30:07,200

um

652

00:30:11,350 --> 00:30:09,120

before we get started is it possible

653

00:30:15,909 --> 00:30:11,360

maybe that you could just test the tone

654

00:30:31,110 --> 00:30:17,750

okay i'll

655

00:30:31,120 --> 00:30:45,909

okay here we go

656

00:30:51,430 --> 00:30:50,070

were you able to hear the tone

657

00:30:53,350 --> 00:30:51,440

amazing very good

658

00:30:57,669 --> 00:30:53,360

koichi how do you feel when you play

659

00:31:01,990 --> 00:30:59,669

it's a very soothing

660

00:31:05,190 --> 00:31:02,000

sound and

661

00:31:07,990 --> 00:31:05,200

it's really a comfortable tone and uh it

662

00:31:10,630 --> 00:31:08,000

really fits this microgravity floating

663

00:31:11,830 --> 00:31:10,640

in the microgravity

664

00:31:14,149 --> 00:31:11,840

all right great

665

00:31:14,950 --> 00:31:14,159

would you like yes so um

666

00:31:17,269 --> 00:31:14,960

coach

667

00:31:19,190 --> 00:31:17,279

i would like to perform with you and uh

668

00:31:23,669 --> 00:31:19,200

just a note about the toning of this i

669

00:31:25,830 --> 00:31:23,679

had to tune my violin down to 430 hertz

670

00:31:27,750 --> 00:31:25,840

to match the tuning of the show which is

671

00:31:30,230 --> 00:31:27,760

a very particular tuning

672

00:31:33,430 --> 00:31:30,240

and given that the show is an instrument

673

00:31:35,350 --> 00:31:33,440

to tune the cosmos traditionally

674

00:31:37,669 --> 00:31:35,360

i would like to dedicate this

675

00:31:40,310 --> 00:31:37,679

collaboration and performance as a

676
00:31:45,590 --> 00:31:40,320
prayer for our planet earth for our

677
00:31:47,909 --> 00:31:45,600
family and our loved ones in healing

678
00:31:49,590 --> 00:31:47,919
our loved ones and our family and our

679
00:31:50,389 --> 00:31:49,600
and our planet earth so

680
00:32:09,669 --> 00:31:50,399
um

681
00:32:09,679 --> 00:32:20,630
hey

682
00:32:20,640 --> 00:32:31,110
so

683
00:33:28,230 --> 00:33:18,870
my

684
00:33:28,240 --> 00:34:25,030
um

685
00:34:25,040 --> 00:35:14,870
hey

686
00:35:19,270 --> 00:35:17,589
absolutely beautiful wow that was

687
00:35:21,589 --> 00:35:19,280
marvelous thank you koichi that was

688
00:35:22,630 --> 00:35:21,599

amazing uh wow

689

00:35:28,950 --> 00:35:22,640

thank you

690

00:35:30,950 --> 00:35:28,960

and we have several schools connected we

691

00:35:32,550 --> 00:35:30,960

have pearl hall and henry university who

692

00:35:34,710 --> 00:35:32,560

would like an opportunity to speak with

693

00:35:37,430 --> 00:35:34,720

you and ask you a few questions i'd like

694

00:35:39,430 --> 00:35:37,440

to first go to pearl hall please um your

695

00:35:45,030 --> 00:35:39,440

microphone and ask kenji your first two

696

00:35:50,230 --> 00:35:48,470

hi my name is denise rodriguez and my

697

00:35:51,030 --> 00:35:50,240

question is

698

00:36:03,030 --> 00:35:51,040

how

699

00:36:05,030 --> 00:36:03,040

in

700

00:36:08,069 --> 00:36:05,040

order to play

701
00:36:09,750 --> 00:36:08,079
on the iss what are the differences

702
00:36:15,430 --> 00:36:09,760
between playing

703
00:36:19,589 --> 00:36:18,069
well that's a very good question

704
00:36:21,589 --> 00:36:19,599
here onboard the international space

705
00:36:24,870 --> 00:36:21,599
station we have air

706
00:36:27,750 --> 00:36:24,880
and the the pressure of the air is

707
00:36:29,030 --> 00:36:27,760
pretty much same as the the pressure on

708
00:36:32,069 --> 00:36:29,040
the ground

709
00:36:34,390 --> 00:36:32,079
so the uh the acoustic characteristics

710
00:36:36,630 --> 00:36:34,400
of the air that we breathe here inside

711
00:36:37,829 --> 00:36:36,640
of the space station is the same as on

712
00:36:39,430 --> 00:36:37,839
the ground

713
00:36:41,190 --> 00:36:39,440

as a result

714

00:36:43,510 --> 00:36:41,200

sound of

715

00:36:46,069 --> 00:36:43,520

our voice you know transmits very

716

00:36:49,190 --> 00:36:46,079

similar that's why we do not need to

717

00:36:51,349 --> 00:36:49,200

make any special adjustment of many

718

00:36:52,470 --> 00:36:51,359

musical instruments that we have

719

00:36:53,589 --> 00:36:52,480

and then

720

00:36:56,150 --> 00:36:53,599

so

721

00:36:58,150 --> 00:36:56,160

we can play it and listen to the musical

722

00:37:12,870 --> 00:36:58,160

instruments like on the ground here

723

00:37:17,190 --> 00:37:15,349

hi my name is eric and my question is do

724

00:37:19,990 --> 00:37:17,200

you believe that the existence of

725

00:37:23,589 --> 00:37:20,000

instruments and music on the iss

726

00:37:30,310 --> 00:37:23,599

increases the longevity and

727

00:37:34,150 --> 00:37:31,990

yeah that's a that's really a good

728

00:37:38,150 --> 00:37:34,160

question then yes i

729

00:37:41,510 --> 00:37:38,160

strongly believe that the music

730

00:37:44,069 --> 00:37:41,520

gives us a sensation of relaxation

731

00:37:46,630 --> 00:37:44,079

in space as well as on the ground

732

00:37:48,710 --> 00:37:46,640

and then listening to music playing

733

00:37:50,790 --> 00:37:48,720

music on board the space station will

734

00:37:52,310 --> 00:37:50,800

make our life on board the space station

735

00:37:55,589 --> 00:37:52,320

more enjoyable

736

00:37:57,829 --> 00:37:55,599

and it's the same on the ground and here

737

00:38:00,230 --> 00:37:57,839

in the very

738

00:38:02,870 --> 00:38:00,240

secluded area of the space station where

739

00:38:06,230 --> 00:38:02,880

we have only six crew members and the

740

00:38:21,109 --> 00:38:06,240

music is a really good psychological

741

00:38:26,710 --> 00:38:23,990

all right so henry university

742

00:38:29,589 --> 00:38:26,720

their first question is how will 3d

743

00:38:34,710 --> 00:38:29,599

printing support future human missions

744

00:38:39,510 --> 00:38:36,710

yeah

745

00:38:40,470 --> 00:38:39,520

3d print printing technology

746

00:38:43,589 --> 00:38:40,480

will

747

00:38:45,030 --> 00:38:43,599

enable us to have very efficient

748

00:38:47,270 --> 00:38:45,040

production of

749

00:38:50,630 --> 00:38:47,280

parts that i use

750

00:38:52,390 --> 00:38:50,640

for rockets and human spacecraft

751
00:38:54,069 --> 00:38:52,400
and right now onboard the space station

752
00:38:55,990 --> 00:38:54,079
we don't have 3d

753
00:38:58,550 --> 00:38:56,000
printing machines but there are a lot of

754
00:39:00,310 --> 00:38:58,560
parts that are already used in in the

755
00:39:02,390 --> 00:39:00,320
space station program that came from

756
00:39:06,230 --> 00:39:02,400
this 3d printing

757
00:39:09,349 --> 00:39:06,240
production and maybe when we go to mars

758
00:39:12,470 --> 00:39:09,359
uh or asteroid probably mars

759
00:39:14,710 --> 00:39:12,480
uh astronauts may be making our own

760
00:39:17,349 --> 00:39:14,720
parts that are needed to continue the

761
00:39:19,990 --> 00:39:17,359
space flight and the activities on mars

762
00:39:22,150 --> 00:39:20,000
using the technology of 3d printing

763
00:39:23,990 --> 00:39:22,160

productions

764

00:39:25,829 --> 00:39:24,000

here henry let's give you guys another

765

00:40:09,030 --> 00:39:25,839

shot please emu your microphone and ask

766

00:40:14,150 --> 00:40:11,349

jackson has an experiment on the space

767

00:40:17,430 --> 00:40:14,160

station that is look at

768

00:40:20,470 --> 00:40:17,440

how semiconductor materials grow and

769

00:41:19,589 --> 00:40:20,480

crystallize in microgravity will this

770

00:41:24,710 --> 00:41:21,349

yeah definitely uh we have been

771

00:41:26,309 --> 00:41:24,720

conducting experiments of producing or

772

00:41:28,710 --> 00:41:26,319

developing the technology of

773

00:41:30,950 --> 00:41:28,720

semiconductor materials in

774

00:41:33,030 --> 00:41:30,960

onboard the space station utilizing the

775

00:41:35,829 --> 00:41:33,040

very unique microgravity

776
00:41:37,109 --> 00:41:35,839
environment on the space station

777
00:41:39,349 --> 00:41:37,119
and

778
00:41:43,670 --> 00:41:39,359
by utilizing this microgravity

779
00:41:46,950 --> 00:41:43,680
environment we can make a very good

780
00:41:48,470 --> 00:41:46,960
high quality homogeneous materials of

781
00:41:50,470 --> 00:41:48,480
semiconductors

782
00:41:52,710 --> 00:41:50,480
and that will benefit the the

783
00:41:55,430 --> 00:41:52,720
enhancement of the technology of

784
00:41:58,150 --> 00:41:55,440
semiconductor development or production

785
00:41:59,670 --> 00:41:58,160
on the ground and until recently we have

786
00:42:02,550 --> 00:41:59,680
been conducting an experiment called

787
00:42:04,790 --> 00:42:02,560
hikari experiment that we

788
00:42:06,790 --> 00:42:04,800

tested or experimented the the

789

00:42:10,069 --> 00:42:06,800

semiconductor materials

790

00:42:12,230 --> 00:42:10,079

using uh silicon and germanium and

791

00:42:15,190 --> 00:42:12,240

that's done in this keyboard module just

792

00:42:25,510 --> 00:42:17,510

pearl hall you're up next please ask

793

00:42:30,390 --> 00:42:28,550

hi i'm viviana southeastern

794

00:42:33,589 --> 00:42:30,400

southeastern high school which is in our

795

00:42:34,710 --> 00:42:33,599

hometown has has an experiment on space

796

00:42:38,150 --> 00:42:34,720

station

797

00:42:40,470 --> 00:42:38,160

that is researching the reaction

798

00:42:43,349 --> 00:42:40,480

of the polymer polymers

799

00:42:45,589 --> 00:42:43,359

that becomes a hard sticky foam

800

00:42:51,349 --> 00:42:45,599

how could astronauts use this type of

801

00:42:55,750 --> 00:42:53,829

yeah thank you for the question that's

802

00:42:57,589 --> 00:42:55,760

that's one of the the nanoracks

803

00:42:59,190 --> 00:42:57,599

experiments that we have been conducting

804

00:43:01,589 --> 00:42:59,200

on both the international space station

805

00:43:04,550 --> 00:43:01,599

that is a very neat technology

806

00:43:06,870 --> 00:43:04,560

and i i think by using that

807

00:43:09,670 --> 00:43:06,880

polymer technology we will be able to

808

00:43:12,390 --> 00:43:09,680

fix the for example damage and the

809

00:43:15,510 --> 00:43:12,400

cracks that occurs on the parts or the

810

00:43:17,589 --> 00:43:15,520

structures of the space station so

811

00:43:20,390 --> 00:43:17,599

definitely that will be utilized you

812

00:43:23,829 --> 00:43:20,400

know for future uh space activities on

813

00:43:25,109 --> 00:43:23,839

both the space station and maybe

814

00:43:28,710 --> 00:43:25,119

on a different

815

00:43:51,109 --> 00:43:31,510

at henry university your final question

816

00:43:51,119 --> 00:44:52,950

foreign

817

00:44:57,270 --> 00:44:54,710

this is a very similar questions that i

818

00:44:59,589 --> 00:44:57,280

received earlier but the

819

00:45:02,230 --> 00:44:59,599

we already have a variety of

820

00:45:04,550 --> 00:45:02,240

parts that are made from the 3d printing

821

00:45:07,030 --> 00:45:04,560

technologies that are right now used

822

00:45:09,510 --> 00:45:07,040

on the space station and other parts of

823

00:45:11,990 --> 00:45:09,520

the space development and i'm hoping and

824

00:45:14,150 --> 00:45:12,000

i believe that in the future when we go

825

00:45:16,550 --> 00:45:14,160

beyond north orbit

826

00:45:18,550 --> 00:45:16,560

for example to mars

827

00:45:21,190 --> 00:45:18,560

astronauts will be able to make new

828

00:45:23,510 --> 00:45:21,200

parts uh utilizing the 3d printing

829

00:45:25,750 --> 00:45:23,520

technology that are needed for repair

830

00:45:28,470 --> 00:45:25,760

and maintenance of a spacecraft or space

831

00:45:31,589 --> 00:45:28,480

structure that we will have on board

832

00:45:33,829 --> 00:45:31,599

on mars surface so it's a very unique

833

00:45:37,270 --> 00:45:33,839

and very

834

00:45:38,470 --> 00:45:37,280

technology

835

00:45:42,470 --> 00:45:38,480

thank you

836

00:45:48,630 --> 00:45:42,480

last quick question from pearl hall

837

00:45:53,109 --> 00:45:50,950

hi my name is german and my question is

838

00:45:55,190 --> 00:45:53,119

what have you or your crew members learn

839

00:45:57,109 --> 00:45:55,200

about living in space for longer times

840

00:46:02,390 --> 00:45:57,119

that will help scott kelly when he gets

841

00:46:08,710 --> 00:46:05,190

yeah that's a very good question

842

00:46:11,430 --> 00:46:08,720

i think we are gaining a lot of

843

00:46:13,430 --> 00:46:11,440

experience in the the counter measures

844

00:46:16,230 --> 00:46:13,440

to cope with a situation where we lose

845

00:46:19,430 --> 00:46:16,240

bone density and muscle strength and

846

00:46:22,550 --> 00:46:19,440

exercise is very important we're gaining

847

00:46:24,069 --> 00:46:22,560

a lot of experience of very efficient

848

00:46:26,390 --> 00:46:24,079

way to conduct

849

00:46:30,710 --> 00:46:26,400

exercise during the flight and that kind

850

00:46:33,349 --> 00:46:30,720

of data will uh help develop uh

851
00:46:35,270 --> 00:46:33,359
exercise protocol that will be used for

852
00:46:37,349 --> 00:46:35,280
long duration long graduation space

853
00:46:40,790 --> 00:46:37,359
flight like scott kelly's

854
00:46:43,349 --> 00:46:40,800
and amisha konyenko's one year flight so

855
00:46:44,790 --> 00:46:43,359
this kind of experiment experience and

856
00:46:47,030 --> 00:46:44,800
also uh

857
00:46:49,190 --> 00:46:47,040
we know how important the food is and

858
00:46:50,309 --> 00:46:49,200
then some other psychological support

859
00:46:52,710 --> 00:46:50,319
tools are

860
00:46:54,470 --> 00:46:52,720
for a long flight so this kind of

861
00:46:56,150 --> 00:46:54,480
operational experience that we are

862
00:46:58,550 --> 00:46:56,160
having now onboard the international

863
00:47:02,069 --> 00:46:58,560

space station will benefit

864

00:47:03,829 --> 00:47:02,079

for the longer duration space flight

865

00:47:05,670 --> 00:47:03,839

thank you koichi and thank you for

866

00:47:07,750 --> 00:47:05,680

joining us today would you like to say

867

00:47:11,510 --> 00:47:07,760

goodbye to all of our friends here on

868

00:47:15,670 --> 00:47:13,829

yeah thank you very much everyone uh it

869

00:47:17,349 --> 00:47:15,680

was truly a pleasure

870

00:47:19,589 --> 00:47:17,359

to be able to play this musical

871

00:47:20,710 --> 00:47:19,599

instrument and answering your wonderful

872

00:47:22,790 --> 00:47:20,720

questions

873

00:47:25,750 --> 00:47:22,800

and i look forward to having more

874

00:47:27,910 --> 00:47:25,760

opportunity to be able to to join you in

875

00:47:29,910 --> 00:47:27,920

the future and talk about the experience

876
00:47:31,030 --> 00:47:29,920
that i had on board international space

877
00:47:47,750 --> 00:47:31,040
station

878
00:47:49,829 --> 00:47:47,760
that concludes our event

879
00:47:52,069 --> 00:47:49,839
all right that was wonderful what an

880
00:47:53,589 --> 00:47:52,079
amazing experience getting to talk to

881
00:47:55,030 --> 00:47:53,599
koichi on the international space

882
00:47:57,670 --> 00:47:55,040
station and thank you kenji for that

883
00:47:59,510 --> 00:47:57,680
beautiful music thank you it's an honor

884
00:48:01,349 --> 00:47:59,520
all right well we have a very special

885
00:48:03,750 --> 00:48:01,359
opportunity to kind of sing a song on

886
00:48:06,309 --> 00:48:03,760
behalf of koichi um jamie why don't you

887
00:48:07,910 --> 00:48:06,319
share with us about our next song yes

888
00:48:09,589 --> 00:48:07,920

one of the things that our guests for

889

00:48:11,670 --> 00:48:09,599

the building cultural bridges program do

890

00:48:14,950 --> 00:48:11,680

is to bring their culture to us through

891

00:48:16,870 --> 00:48:14,960

music and so when koichi came his song

892

00:48:19,190 --> 00:48:16,880

that he shared was his favorite piece of

893

00:48:22,309 --> 00:48:19,200

music from his childhood called usagi

894

00:48:25,190 --> 00:48:22,319

usagi translated into english is rabbit

895

00:48:27,030 --> 00:48:25,200

rabbit and so we it's about the moon

896

00:48:29,670 --> 00:48:27,040

which is a big important part of what

897

00:48:44,790 --> 00:48:29,680

we're studying here at nasa so we'll

898

00:48:44,800 --> 00:48:55,829

bye

899

00:48:55,839 --> 00:49:09,190

oh

900

00:49:09,200 --> 00:49:23,670

mmm

901
00:49:23,680 --> 00:49:36,150
oh

902
00:49:36,160 --> 00:50:02,309
is

903
00:50:06,710 --> 00:50:04,230
thank you so much

904
00:50:08,870 --> 00:50:06,720
um obviously music is a really important

905
00:50:10,230 --> 00:50:08,880
part of our life here on earth and of

906
00:50:12,150 --> 00:50:10,240
course on the international space

907
00:50:14,069 --> 00:50:12,160
station and katie i would really like

908
00:50:15,349 --> 00:50:14,079
for you to share with us um some of the

909
00:50:16,790 --> 00:50:15,359
instruments that have been onboard the

910
00:50:18,710 --> 00:50:16,800
space station and maybe some of your

911
00:50:20,549 --> 00:50:18,720
personal experiences

912
00:50:22,470 --> 00:50:20,559
well i think some of you know that i

913
00:50:24,390 --> 00:50:22,480

play the flute and you know i've done

914

00:50:26,150 --> 00:50:24,400

that since i was a kid

915

00:50:27,990 --> 00:50:26,160

but i wasn't a professional flute player

916

00:50:30,069 --> 00:50:28,000

i just like to play and i like to play

917

00:50:31,829 --> 00:50:30,079

with people when i went up to the space

918

00:50:33,910 --> 00:50:31,839

station and i had a little room to bring

919

00:50:35,430 --> 00:50:33,920

a few things i did bring my flute in

920

00:50:38,549 --> 00:50:35,440

fact it's actually

921

00:50:41,430 --> 00:50:38,559

this one right here and it's been

922

00:50:43,430 --> 00:50:41,440

93 million miles i think something like

923

00:50:45,109 --> 00:50:43,440

that it went around quite and in fact i

924

00:50:46,710 --> 00:50:45,119

brought several other flutes up to the

925

00:50:48,309 --> 00:50:46,720

space station as well because it was

926

00:50:50,870 --> 00:50:48,319

important to me to share my space

927

00:50:52,870 --> 00:50:50,880

station experience in that way um i

928

00:50:55,430 --> 00:50:52,880

think we've got some neat video of just

929

00:50:56,790 --> 00:50:55,440

my instruments and other and other folks

930

00:50:59,270 --> 00:50:56,800

and i i'll just kind of talk through it

931

00:51:01,829 --> 00:50:59,280

while we watch um this

932

00:51:03,750 --> 00:51:01,839

i love just showing people that it's a

933

00:51:05,829 --> 00:51:03,760

different world up there and when you

934

00:51:08,309 --> 00:51:05,839

saw koichi tossing the show back and

935

00:51:10,390 --> 00:51:08,319

forth and just kind of tumbling around

936

00:51:12,630 --> 00:51:10,400

this is a duet that i played with mr ian

937

00:51:14,390 --> 00:51:12,640

anderson of the musical group jethro

938

00:51:16,950 --> 00:51:14,400

tull he was the person that brought the

939

00:51:18,870 --> 00:51:16,960

flute to rock music and so we played a

940

00:51:21,990 --> 00:51:18,880

duet and it was actually the first duet

941

00:51:24,870 --> 00:51:22,000

between earth and space so i don't mean

942

00:51:26,470 --> 00:51:24,880

to show you up kenji

943

00:51:28,549 --> 00:51:26,480

but we've had a number of people bring

944

00:51:30,150 --> 00:51:28,559

instruments up and even just you know

945

00:51:31,670 --> 00:51:30,160

listening to music having fun together

946

00:51:33,829 --> 00:51:31,680

having fun with your friends on the

947

00:51:36,549 --> 00:51:33,839

ground this is part of a music video

948

00:51:38,470 --> 00:51:36,559

called world by five five for fighting

949

00:51:40,630 --> 00:51:38,480

where it said what kind of world do you

950

00:51:41,990 --> 00:51:40,640

want and and that's just something

951
00:51:44,309 --> 00:51:42,000
that's really important for all of us to

952
00:51:45,910 --> 00:51:44,319
think about and i think um when we get

953
00:51:48,549 --> 00:51:45,920
together and we play music this is

954
00:51:50,230 --> 00:51:48,559
myself uh and the chieftains a group

955
00:51:52,710 --> 00:51:50,240
called the chieftains i brought a penny

956
00:51:55,030 --> 00:51:52,720
whistle and a 150 year old flute up to

957
00:51:58,150 --> 00:51:55,040
the space station uh for that group and

958
00:52:00,390 --> 00:51:58,160
we're playing with the houston symphony

959
00:52:02,870 --> 00:52:00,400
and it's to me it was just it was

960
00:52:04,230 --> 00:52:02,880
important to play together

961
00:52:05,750 --> 00:52:04,240
the fact that i i played their

962
00:52:07,829 --> 00:52:05,760
instruments up in space and then i

963
00:52:09,270 --> 00:52:07,839

brought them home and i got to talk with

964

00:52:10,710 --> 00:52:09,280

them and play with them and if you see

965

00:52:12,790 --> 00:52:10,720

me right here i'm playing in duet with

966

00:52:14,630 --> 00:52:12,800

mr matt malloy and i will tell you that

967

00:52:16,470 --> 00:52:14,640

i'm very nervous

968

00:52:18,549 --> 00:52:16,480

and and and i think it's really

969

00:52:21,030 --> 00:52:18,559

important for our students here

970

00:52:22,390 --> 00:52:21,040

and for people who play instruments to

971

00:52:23,750 --> 00:52:22,400

realize that

972

00:52:25,190 --> 00:52:23,760

you don't have to be the best in the

973

00:52:27,510 --> 00:52:25,200

whole world you just have to want to

974

00:52:29,670 --> 00:52:27,520

share and then it takes a certain amount

975

00:52:31,670 --> 00:52:29,680

of being brave you know here's chris

976
00:52:33,510 --> 00:52:31,680
hadfield playing the guitar you know

977
00:52:35,829 --> 00:52:33,520
he's a wonderful guitar player and

978
00:52:37,510 --> 00:52:35,839
singer songwriter um is he the best in

979
00:52:40,309 --> 00:52:37,520
the world well probably not but was he

980
00:52:41,750 --> 00:52:40,319
willing to be brave and share he was and

981
00:52:43,190 --> 00:52:41,760
in fact here we are playing it's our

982
00:52:45,349 --> 00:52:43,200
group that we play together with chris

983
00:52:46,950 --> 00:52:45,359
on the ground bandela we are playing

984
00:52:49,349 --> 00:52:46,960
with the houston symphony with the

985
00:52:51,910 --> 00:52:49,359
chieftains and we're playing moon dance

986
00:52:53,589 --> 00:52:51,920
and so chris was on the space station we

987
00:52:54,630 --> 00:52:53,599
were in symphony hall right here in

988
00:52:58,069 --> 00:52:54,640

houston

989

00:53:01,910 --> 00:52:58,079

and together we played music together

990

00:53:04,309 --> 00:53:01,920

just just like koichi and kenji just did

991

00:53:07,670 --> 00:53:04,319

and one of the earlier questions that we

992

00:53:10,870 --> 00:53:07,680

had was about whether there's something

993

00:53:12,630 --> 00:53:10,880

spiritual or just a sense of awe that

994

00:53:14,950 --> 00:53:12,640

you would have in in being up on the

995

00:53:16,630 --> 00:53:14,960

space station and i don't think it's

996

00:53:19,349 --> 00:53:16,640

just because i've been there but when

997

00:53:22,710 --> 00:53:19,359

kenji and koichi played and we watched

998

00:53:24,950 --> 00:53:22,720

the video of sailing over the earth and

999

00:53:27,430 --> 00:53:24,960

in video inside the space station and

1000

00:53:29,670 --> 00:53:27,440

koichi floating around and i think

1001
00:53:31,430 --> 00:53:29,680
cuisine was actually entranced when he

1002
00:53:33,270 --> 00:53:31,440
played that instrument longer than he

1003
00:53:35,430 --> 00:53:33,280
had i mean i think he's getting into it

1004
00:53:37,589 --> 00:53:35,440
you know i i think it just there's

1005
00:53:41,109 --> 00:53:37,599
something special that happened you know

1006
00:53:44,069 --> 00:53:41,119
that moment live together even though he

1007
00:53:45,910 --> 00:53:44,079
was on the space station going 17 500

1008
00:53:48,069 --> 00:53:45,920
miles an hour even if you can't be

1009
00:53:49,190 --> 00:53:48,079
physically close you can be together in

1010
00:53:51,589 --> 00:53:49,200
spirit

1011
00:53:53,510 --> 00:53:51,599
and as we travel further and further

1012
00:53:55,190 --> 00:53:53,520
i think that that's really more and more

1013
00:53:58,390 --> 00:53:55,200

important and one of the ways actually

1014

00:54:01,270 --> 00:53:58,400

just for me in any way um not to be

1015

00:54:02,950 --> 00:54:01,280

you know lonely was to put on music that

1016

00:54:04,870 --> 00:54:02,960

my group would play when we played

1017

00:54:06,549 --> 00:54:04,880

together that mandela would play i would

1018

00:54:08,870 --> 00:54:06,559

put that music on and i would go up to

1019

00:54:11,349 --> 00:54:08,880

the the cupola which is in the middle of

1020

00:54:12,950 --> 00:54:11,359

our space station so

1021

00:54:14,790 --> 00:54:12,960

people are sleeping on either end of the

1022

00:54:16,549 --> 00:54:14,800

space station that means that the cupola

1023

00:54:17,910 --> 00:54:16,559

is is a reasonable place to play you're

1024

00:54:20,390 --> 00:54:17,920

not going to wake anybody up it was

1025

00:54:21,990 --> 00:54:20,400

usually night time and i would open the

1026
00:54:23,589 --> 00:54:22,000
window shutters

1027
00:54:25,750 --> 00:54:23,599
look at the earth

1028
00:54:28,390 --> 00:54:25,760
listen to my my friends back on earth

1029
00:54:29,990 --> 00:54:28,400
playing music and play along and we were

1030
00:54:31,910 --> 00:54:30,000
together in spirit

1031
00:54:35,030 --> 00:54:31,920
and i just think it happens every time

1032
00:54:37,109 --> 00:54:35,040
you get brave and you play and all of us

1033
00:54:39,510 --> 00:54:37,119
that play i think are you know have to

1034
00:54:42,630 --> 00:54:39,520
be a little brave to play and i i very

1035
00:54:44,309 --> 00:54:42,640
much congratulate our choir today for

1036
00:54:45,910 --> 00:54:44,319
being brave and

1037
00:54:48,789 --> 00:54:45,920
standing up in front of everyone and

1038
00:54:50,470 --> 00:54:48,799

saying i'm proud just to share so i just

1039

00:54:52,470 --> 00:54:50,480

music is special and it's it's certainly

1040

00:54:54,069 --> 00:54:52,480

special on the space station it is and

1041

00:54:55,430 --> 00:54:54,079

um i know there's been several musical

1042

00:54:56,710 --> 00:54:55,440

instruments on the space station you

1043

00:54:58,150 --> 00:54:56,720

mentioned your flute and what and the

1044

00:54:59,589 --> 00:54:58,160

instruments you brought um can you think

1045

00:55:01,190 --> 00:54:59,599

of any others that have been in space

1046

00:55:02,710 --> 00:55:01,200

well we've had a keyboard you saw luca

1047

00:55:04,150 --> 00:55:02,720

with the keyboard i wanted to find it

1048

00:55:07,510 --> 00:55:04,160

before the shuttle mission came up

1049

00:55:09,270 --> 00:55:07,520

because greg johnson from sds 134 plays

1050

00:55:11,510 --> 00:55:09,280

the keyboards so i looked on the

1051
00:55:13,349 --> 00:55:11,520
inventory management system for keyboard

1052
00:55:15,750 --> 00:55:13,359
of course like hundreds of keyboards

1053
00:55:18,390 --> 00:55:15,760
showed up like 60 not hundreds but 60

1054
00:55:20,150 --> 00:55:18,400
because every computer has a keyboard

1055
00:55:21,510 --> 00:55:20,160
but then i looked at the locations and

1056
00:55:23,430 --> 00:55:21,520
there was one that was stored in a

1057
00:55:25,910 --> 00:55:23,440
really big place and sure enough you

1058
00:55:29,190 --> 00:55:25,920
know behind this big rack was the

1059
00:55:31,750 --> 00:55:29,200
keyboard uh don pettit made a didgeridoo

1060
00:55:33,910 --> 00:55:31,760
we've had several guitars uh there's

1061
00:55:35,510 --> 00:55:33,920
been a trumpet in fact uh frank

1062
00:55:38,710 --> 00:55:35,520
culbertson i think played taps

1063
00:55:40,789 --> 00:55:38,720

unfortunately after uh nine on

1064

00:55:42,390 --> 00:55:40,799

9 11 yep

1065

00:55:44,470 --> 00:55:42,400

there are special ways to express

1066

00:55:47,190 --> 00:55:44,480

yourself and even if we don't bring

1067

00:55:49,349 --> 00:55:47,200

musical instruments there will be music

1068

00:55:52,150 --> 00:55:49,359

on that space station that's right thank

1069

00:55:54,069 --> 00:55:52,160

you well we have one final piece and to

1070

00:55:56,150 --> 00:55:54,079

share with you today so jamie why don't

1071

00:55:58,950 --> 00:55:56,160

you share with us about our next song oh

1072

00:56:01,270 --> 00:55:58,960

susanna yes oh susanna was brought to

1073

00:56:04,630 --> 00:56:01,280

our ability cultural bridges program by

1074

00:56:06,789 --> 00:56:04,640

astronaut commander dan burbank and dan

1075

00:56:08,870 --> 00:56:06,799

shared with our students that he felt

1076

00:56:10,390 --> 00:56:08,880

that music and literature were two of

1077

00:56:12,789 --> 00:56:10,400

the most important things we have

1078

00:56:14,789 --> 00:56:12,799

because they tell others about us and i

1079

00:56:17,190 --> 00:56:14,799

think that's one thing that that music

1080

00:56:19,349 --> 00:56:17,200

is doing in connecting us with other

1081

00:56:22,390 --> 00:56:19,359

cultures of the space station program

1082

00:56:25,190 --> 00:56:22,400

and connects also with for our students

1083

00:56:27,750 --> 00:56:25,200

or students in any school in any country

1084

00:56:29,829 --> 00:56:27,760

to connect integrated curriculum and to

1085

00:56:32,710 --> 00:56:29,839

better make it an artful way to present

1086

00:56:34,630 --> 00:56:32,720

information and connect us to each other

1087

00:56:36,870 --> 00:56:34,640

to our curriculum which is what this

1088

00:56:38,630 --> 00:56:36,880

entire program today has been doing so

1089

00:56:40,470 --> 00:56:38,640

we would like to share

1090

00:56:42,950 --> 00:56:40,480

james taylor's version which was taught

1091

00:56:44,870 --> 00:56:42,960

to us by dan burbank

1092

00:56:47,270 --> 00:56:44,880

of oh susannah katie is going to play

1093

00:56:50,230 --> 00:56:47,280

some jazz flute part around with the the

1094

00:57:11,190 --> 00:56:50,240

interlude so without further ado here's

1095

00:57:18,230 --> 00:57:14,710

well i come from alabama

1096

00:57:21,670 --> 00:57:18,240

with his banjo on my knee

1097

00:57:25,109 --> 00:57:21,680

and i bound for louisiana

1098

00:57:28,789 --> 00:57:25,119

my true love for to

1099

00:57:31,670 --> 00:57:28,799

when it see all night the day i left the

1100

00:57:35,309 --> 00:57:31,680

weather was born dry

1101

00:57:44,230 --> 00:57:35,319

the sun was so hot i froze myself

1102

00:57:50,549 --> 00:57:47,270

don't you cry for me

1103

00:57:54,230 --> 00:57:50,559

cause i come from alabama

1104

00:57:56,950 --> 00:57:54,240

with his banjo on my knee

1105

00:58:00,630 --> 00:57:56,960

well i had myself a dream the other

1106

00:58:03,990 --> 00:58:00,640

night when everything was still

1107

00:58:06,630 --> 00:58:04,000

i'd you never saw my girls who's in a

1108

00:58:10,150 --> 00:58:06,640

coming round

1109

00:58:12,470 --> 00:58:10,160

a buckwheat cake was in her mouth a tear

1110

00:58:16,109 --> 00:58:12,480

was in her eye

1111

00:58:20,390 --> 00:58:16,119

i said that come from dixieland

1112

00:58:25,030 --> 00:58:20,400

suzanna don't you go on and cry

1113

00:58:31,349 --> 00:58:27,990

don't you cry for me

1114

00:59:17,109 --> 00:58:31,359

cause i come from alabama

1115

00:59:23,990 --> 00:59:20,630

now don't you cry for me

1116

00:59:34,470 --> 00:59:24,000

cause i come from alabama

1117

00:59:38,789 --> 00:59:36,710

thank you so much this has been such a

1118

00:59:40,870 --> 00:59:38,799

wonderful experience for us all and i'm

1119

00:59:42,870 --> 00:59:40,880

really happy that we were able to join

1120

00:59:45,430 --> 00:59:42,880

so many people together to put together

1121

00:59:47,670 --> 00:59:45,440

the music and space event today so i'd

1122

00:59:49,670 --> 00:59:47,680

like to begin by thanking all the folks

1123

00:59:51,349 --> 00:59:49,680

behind the scenes here at johnson space

1124

00:59:54,630 --> 00:59:51,359

center who helped produce the event for

1125

00:59:58,630 --> 00:59:54,640

us today and i'd like to thank kenji

1126
01:00:00,230 --> 00:59:58,640
and katie and jamie and sarah gay and

1127
01:00:01,750 --> 01:00:00,240
our choir director pat surface who's

1128
01:00:04,150 --> 01:00:01,760
behind the scenes still

1129
01:00:05,910 --> 01:00:04,160
for being a part of the program and of

1130
01:00:08,549 --> 01:00:05,920
course the students at pearl hall

1131
01:00:11,589 --> 01:00:08,559
elementary are virtual participants and

1132
01:00:13,510 --> 01:00:11,599
then tenure university for for helping

1133
01:00:15,190 --> 01:00:13,520
uh get the show to the international

1134
01:00:17,829 --> 01:00:15,200
space station we really appreciate all

1135
01:00:20,230 --> 01:00:17,839
of your support and a big thanks to our

1136
01:00:21,910 --> 01:00:20,240
amazing choir

1137
01:00:23,910 --> 01:00:21,920
wonderful

1138
01:00:24,710 --> 01:00:23,920

thank you so much

1139

01:00:26,630 --> 01:00:24,720

and

1140

01:00:29,030 --> 01:00:26,640

if any of you are interested in being a

1141

01:00:31,589 --> 01:00:29,040

part of a digital learning network event

1142

01:00:34,069 --> 01:00:31,599

i encourage you to visit our website at

1143

01:00:36,309 --> 01:00:34,079

dln.nasa.gov

1144

01:00:38,870 --> 01:00:36,319

and to all of you watching on the dll

1145

01:00:41,109 --> 01:00:38,880

info channel and on nasa television on

1146

01:02:31,190 --> 01:00:41,119

behalf of everyone thank you for joining